RCRA CONTINGENCY PLAN
Implementation Report No. 93-005

RCRA CONTINGENCY PLAN
IMPLEMENTATION REPORT
ROCKY FLATS PLANT
EPA ID NUMBER CO7890010526

This report is made in compliance with the requirements of 6 CCR 1007-3, Parts 264.56 (j) and 265.56 (j) for a written report within 15 days of the implementation of the RCRA Contingency Plan. The requirements for this are given below and will be addressed in the order listed, excerpted from 6 CCR 1007-3, Parts 264.56 and 265.56:

"(j)...Within 15 days after the incident, he must submit a written report on the incident to the department. The report must include:

(1) Name, address, and telephone number of the owner or operator
(2) Name, address, and telephone number of the facility
(3) Date, time, and type of incident (fire, explosion)
(4) Name and quantity of material(s) involved
(5) The extent of injuries, if any
(6) An assessment of actual or potential hazards to human health and the environment, where this is applicable; and
(7) Estimated quantity and disposition of recovered material resulted from the incident."

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(1) **Name, address and telephone number of the owner of the facility:**

United States Department of Energy
Rocky Flats Plant
Post Office Box 928
Golden, Colorado 80402
(303) 966-2025

Facility Contact:
A. H. Pauole, Acting Manager

(2) **Name, address and telephone number of the facility:**

U.S. Department of Energy
Rock Flats Plant
Post Office Box 928
Golden, Colorado 80402
(303) 966-2025

(3) DATE, TIME, AND TYPE OF INCIDENT:

A. SUMMARY:

The RCRA Contingency Plan was implemented due to a release on April 26, 1993, of approximately 10 gallons of potentially contaminated ground water originating from a test well under construction as part of a baseline risk assessment for Operable Unit (OU) No. 2.

The release occurred at approximately 4:00 p.m. on Monday April 26, 1993. Contractor personnel were installing a bedrock monitoring well. During drilling operations in the area known as Operable Unit 2, a length of pipe (surface casing) was inserted into a bedrock monitoring well to prevent contamination of the under lying bedrock by potentially contaminated ground water. The insertion of the casing forced the water out of the hole and onto the ground. The material wetted an area approximately 2 feet by 8 feet. Steps were immediately taken to recover the released material. A desiccant, "Aqua-Set™", was applied to the area to prevent the spread of the released material. The area was cleaned up to the extent that dry dirt was uncovered. The material (Aqua-Set™, soil and water) was containerized, and is being managed as investigation derived material pending laboratory analysis.

Based on the results of previous analytical testing of well #3687, which is 20 feet up-gradient from the well under construction, hazardous waste constituents have been detected. The listed contaminants that have been detected are tetrachloroethylene, trichloroethylene and carbon tetrachloride. tetrachloroethylene, trichloroethylene and carbon tetrachloride are also characteristic constituents. Additional characteristic constituents that have been detected are 1,1-dichloroethylene and chloroform. The source of the contamination is thought to be the 903 Pad area (IHSS Ref. Nc. 112, 155, 109, 140, and 183), East Area Trenches (T3 through T11; IHSS Ref. No. 110, 111.1 through 111.8, 216.2 and 216.3) and the Mound Site (IHSS Ref. No. 113). The area is being evaluated for the Phase II RCRA Facility Investigation/Remedial Investigation (RFI/RI). The area in which the spill occurred is not an identified IHSS; however, the area is a potential area of concern. Due to the suspected presence of hazardous waste constituents in the released material and due to the fact that the Environmental Protection Agency (EPA) requires ground water and other media which contains listed hazardous waste be managed as hazardous waste when it is removed from the ground (the "contained in" ruling), the RCRA Contingency Plan was implemented.

B. SYSTEM DESCRIPTION:

N/A

C. DESCRIPTION OF INCIDENT:

The RCRA Contingency Plan was implemented on April 26, 1993, due to a release of approximately 10 gallons of potentially contaminated ground water originating from a test well under construction as part of the base line risk assessment in OU No. 2.

The release occurred at approximately 4:00 p.m. on Monday April 26, 1993. During drilling operations in the area known as OU No. 2, a casing was inserted into a bedrock monitoring well to prevent contamination of the under lying bedrock by potentially contaminated ground water. The insertion of the casing forced the water out of the hole and onto the ground. The material wetted an area approximately 2 feet by 8 feet. Steps were immediately taken to recover the released material. A desiccant "Aqua-Set™", was applied to the area to prevent the spread of the material. The area was cleaned up to the extent that dry dirt was uncovered. The material (Aqua-Set™, soil and water) was containerized, and is being managed as investigation derived material pending laboratory analysis.

D. CORRECTIVE ACTION:

The recoverable material was placed in barrels with "Aqua-Set™". The barrels are being managed with in OU No. 2 area as investigation derived material pending characterization by laboratory analysis. The procedure for inserting sleeve casings in wells has been revised to include a method of capturing any water that may be displaced by the casing to prevent any further releases of ground water to the environment.

(4) EQUIPMENT STATUS:

NA

(5) NAME AND QUANTITY OF MATERIAL INVOLVED:

Approximately 10 gallons of ground water was released from the well. No data is available from the well from which the release occurred; however, laboratory data from a well 20 feet upgradient (well # 3687) indicates a strong possibility that hazardous waste constituents have been released. The listed constituents that have been detected are tetrachloroethylene, trichloroethylene and carbon tetrachloride. Tetrachloroethylene, trichloroethylene and carbon tetrachloride are also characteristic constituents. Additional characteristic constituents that were previously found in well #3687 are 1,1-dichloroethylene and chloroform. The source of the contamination is thought to be the 903 Pad area (IHSS Ref. No. 112, 155, 109, 140, and 183), East Area Trenches (T3 through T11; IHSS Ref. No. 110, 111.1 through 111.8, 216.2 and 216.3) and the Mound Site (IHSS Ref. No. 113). The area is being evaluated for the Phase-II RCRA Facility Investigation/Remedial Investigation (RFI/RI). The area in which the spill occurred is not an identified IHSS, however the area is a potential area of concern. Due to the suspected presence of hazardous waste constituents in the ground water and due to the fact that the EPA requires ground water and other media which contains listed hazardous waste be managed as hazardous waste when removed from the ground (the "contained in" ruling), the RCRA Contingency Plan was implemented as a precaution. Analytical results for the samples taken at the time of this incident will be submitted to CDH and EPA, Region VIII upon completion of the analysis.

(6) EXTENT OF INJURIES:

There were no injuries.

(7) AN ASSESSMENT OF ACTUAL OR POTENTIAL THREAT TO HUMAN HEALTH AND ENVIRONMENT:

Steps were taken immediately to recover the released material. The area wetted by the release was contained by the application of a desiccant "Aqua-Set™". The area was cleaned up until dry soil was encountered and the material was packed into drums with "Aqua-Set™" added to contain any free liquid that may escape. The released material was immediately removed and packaged; therefore, no additional threat to human health or the environment has occurred as a result of this release.

(8) ESTIMATE QUANTITY AND DISPOSITION OF RECOVERED MATERIAL THAT RESULTED FROM THE INCIDENT:

Approximately 10 gallons of ground water thought to be contaminated with hazardous waste constituents, was released from a bedrock monitoring well under construction. The material soaked into the ground. Steps were immediately taken to recover as much of the material as possible. The soil wetted by the spill was cleaned up and placed into barrels with "Aqua-Set". Approximately one and one half barrels of material were removed. The material is being managed as investigation derived material pending the results of laboratory analysis.

Table 1 reflects the analytical results of quarterly samples taken from March 1991 to May 1992 from well #3687 which is 20 feet upgradient from the well under construction, from which the material was released. The material was sampled for volatile organic compounds to determine the types of constituents in the ground water. Previous tests for dissolved metals are at background levels. EPA code F001 listed hazardous waste constituents that have been detected are carbon tetrachloride, tetrachloroethylene and trichloroethylene. These "F" listed constituents are also characteristic hazardous waste for the characteristic of toxicity. The highest observations of these constituents are above the regulatory limits for toxicity. Based on the data available from laboratory analysis, the ground water from well #3687 is a characteristic waste for toxicity because of the presence of trichloroethylene (D040) and carbon tetrachloride (D019). The material may also be characteristic for tetrachloroethylene (D039) since the highest value of the quarterly sampling was above the regulatory limit for toxicity. The 1,1-dichloroethylene which is a hazardous waste for the characteristic of toxicity has been detected in amounts that are above the regulatory limit for a characteristic waste under the RCRA regulations. Additionally, chloroform has been detected in well #3687 but not in amounts that are above RCRA regulatory limits for toxicity. The well, #3687, has been confirmed to have levels of trichloroethylene and carbon tetrachloride above the regulatory limits for toxicity. This increases the probability that the new well under construction also contains material above these limits.

Due to the suspected presence of hazardous waste constituents in the ground water and due to the fact that the EPA requires ground water and other media which contain listed hazardous waste be managed as hazardous waste when removed from the ground (the "contained in" rule), the RCRA Contingency Plan was implemented as a precautionary measure.

TABLE 1

VOLATILE ORGANIC COMPOUNDS •

Analyte	Highest/Average Value Detected (mg/L)	Regulatory Limit (mg/L)
Trichlorethylene (TCE) (F001) (D040)	96.0/50.8	0.50
Carbon tetrachloride (CCl_4) (F001) (D019)	0.870/0.58	0.50
Tetrachloroethylene (PCE) (F001) (D039)	1.10/0.510	0.70
1,1-Dichloroethylene (1,1-DCE) (D029)	1.044/N/A	0.70
Chloroform (D022) ($CHCl_3$)	1.10/0.540	6.00

Volatile Organic Compounds Sampled for but not found:

Acetone	(F003)
Methylene Chloride	(F001)
Vinyl Chloride	(D043)
1,2-Dichloroethane	(D028)
Carbon Disulfate	
Toluene	(F005)

• Based on quarterly sample events from March 1991 to May 1992.